



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200



D407-667-105TRN
Job Sheet 173571



Part No: D407-667-105TRN

Job Qty: 1 ea

Part Name: Crosstube Turning Detail



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 3/5/18

Job Tracking No:

Due Date: 3/23/18

Created By: Michelle Gagnon-Donovan

Type: Stock

Description:

Note: DWG REV C IPP Rev:a 08.02.28 new issue EC IPP Rev B 08.04.02 Removed polish EC verified by: DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	3/22/18	3/22/18	0.00	0.00	Start Up Crosstubes-2		M.D. DASB
100	Mori Seiki	1 pcs	3/22/18	3/22/18	2.21	1.25	Mori Seiki TL-40		M.D. 56
110	QC	1 pcs	3/22/18	3/22/18	0.00	0.00	QC2-2		M.D. 56
120	Mori Seiki	1 pcs	3/22/18	3/22/18	0.00	1.12	Mori Seiki TL-40		M.D. 56
130	QC	1 pcs	3/22/18	3/22/18	0.00	0.00	QC2-2		M.D. 56
140	QC	1 pcs	3/22/18	3/22/18	0.00	0.00	QC8		GP 18-07-03
145	Crosstubes	1 pcs	3/22/18	3/22/18	0.00	0.36	Crosstubes-2		GP 18-07-06
150	HandFXtube	1 pcs	3/23/18	3/23/18	0.00	0.40	Crosstubes-3		GP 18-07-06
160	QC	1 pcs	3/23/18	3/23/18	0.00	0.00	QC7-3		GP 18-07-06
170	Packaging	1 pcs	3/23/18	3/23/18	0.00	0.00	Packaging3-2		DAS GP 18-07-06
180	QC21-SA	1 Ea	3/23/18	3/23/18	0.00	0.00	QC21		21 JUL 0 6 2018

Part Op 100 - 1- Fill tube with sand & install plugs 407-105 on both ends as per Folio FA249 2- Turn both side of tube 3- Turn first Descriptions: taper section on both side as per folio FA249

120 - 1- Turn second taper on both side 4- Scribe part # and batch # using vibrating stylus on the cuff as per Dwg D407-667-145 5- Ultra sound the crosstube as per FAI. "wall thickness mesurment" at given location.

145 - GRIND ONLY TRANSITION LINES SMOOTH LONGITUDE WAY.

150 - 1- handfinish X-TUBE INSIDE AND OUT

170 - LOCATION : LG014

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6010-115	Crosstube Material	1 Ea (1 ea)	90-Start up Operation	

B123975

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6010-115	1	123	0

Part Specifications

Specifications could not be found.

Plex 3/5/18 10:06 AM Dart.Gagnon.Michelle



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CANADA
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Email: sales@dartaero.com
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Container No: S085187



Part: D407-667-105TRN

Job No: 173571

Serial No/Batch: S085187

Revision:

Inspector:

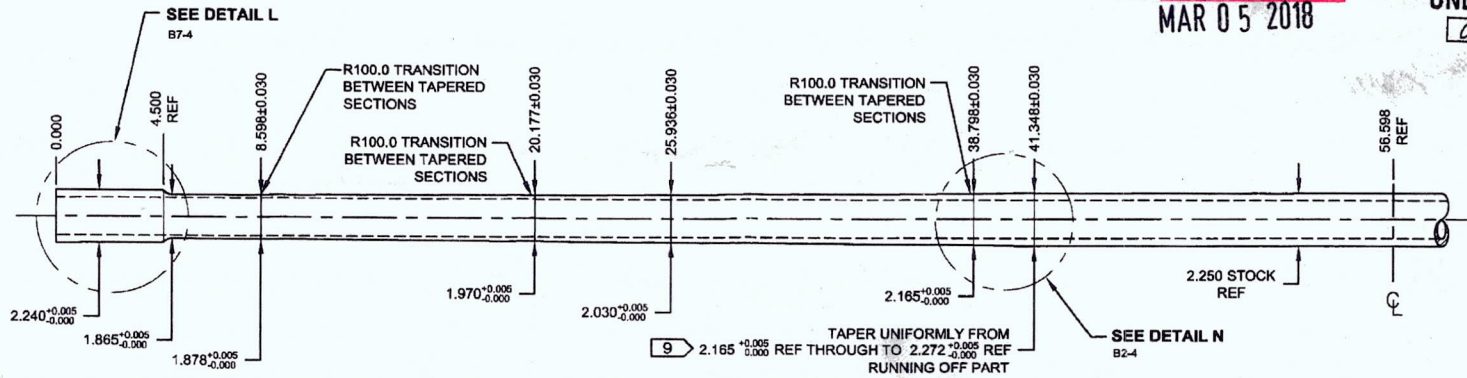
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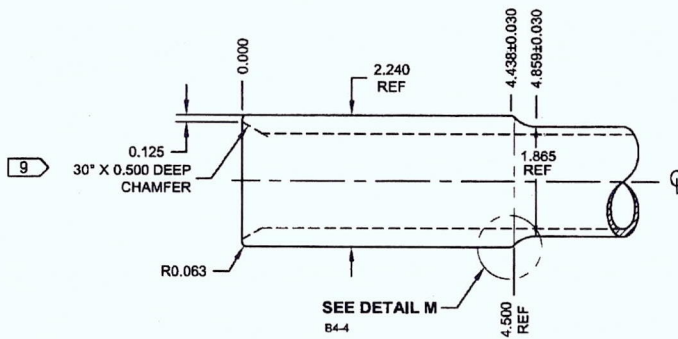
Date: 06/28/18

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 173571
MAR 05 2018

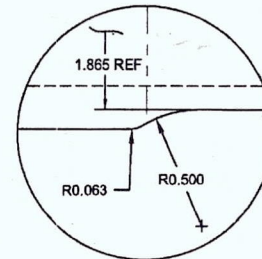
UNDER REVIEW
08/11/13
08/11/13
1.07.26



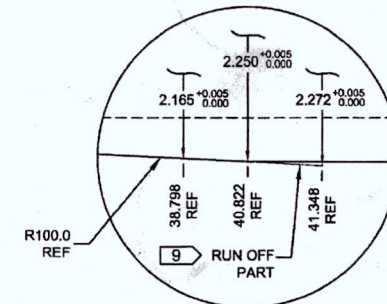
TURNING DETAIL



**DETAIL L:
CROSSTUBE CUFF**
NOT TO SCALE



**DETAIL M:
CUFF TRANSITION**
NOT TO SCALE



**DETAIL N:
TAPER RUN-OFF**
NOT TO SCALE

DEO ATTACHED

RELEASED
08/11/13

DESIGN	9	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	RF	D407-667-145	SHEET 4 OF 4
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	CROSSTUBE ASS'Y (407 HIGH FWD)	NTS
DATE	08.11.06	COPYRIGHT © 2002 BY DART AEROSPACE LTD	
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DRAWING NO. D407-667-145	TITLE CROSSTUBE ASS'Y (407 HIGH FWD)	REV. C	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D407-667-145-C-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN 90	CHECKED ASS	MFG. APPR. IB	APPROVED MD		DE APPR. H		
DATE 11.07.15	DATE 11.07.22	DATE 11.07.22	DATE 11/07/22		DATE 11.07.21		

PURPOSE:

REPLACE MAGNOBOND WITH PROSEAL.

CHANGE:

IS:

Item	Qty -145	Part Number	Description
9	A/R	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

WAS:

9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)
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NOTE 12 & 15, SHEET 1 IS AMENDED AS FOLLOWS:

IS:

- 12) TO INSTALL D2891-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. **PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.**

WAS:

- 12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

RELEASED
2011-07-28
MD

DRAWING NO. D407-667-145	TITLE CROSSTUBE ASS'Y (407 HIGH FWD)	REV. C	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D407-667-145-C-2	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN AJS	CHECKED		MFG. APPR. <i>E</i>	APPROVED <i>AD</i>	DE APPR. <i>[Signature]</i>		
DATE 12.08.02	DATE 12.08.02		DATE 12.08.02	DATE 12.08.02	DATE 12.08.02		

PURPOSE:

ADD ELECTRICAL GROUNDING STRAP

CHANGE:

ITEM	QTY -145	PART NUMBER	DESCRIPTION
1	X	D407-667-145	CROSSTUBE ASSEMBLY (407 HIGH FWD)
⚡			
10	2	AN742D36	CLAMP
11	2	MS9165-05	ANGLE BRACKET
12	2	MS21042L3	NUT (OR MS21042-3)
13	2	MS27039-1-08	SCREW
14	4	NAS1149C0332R	WASHER (OR AN960C10L)

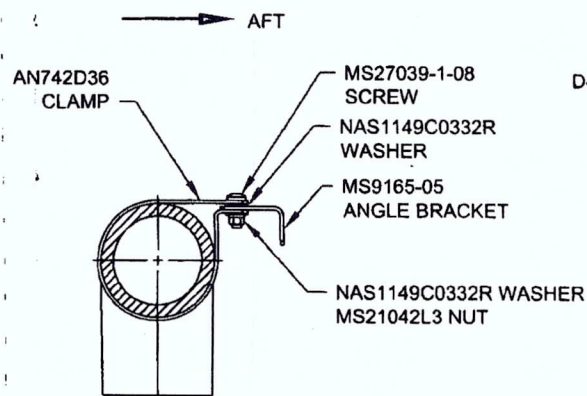
ADD

GENERAL NOTES:

- 16) MASK AREA UNDER CLAMP PRIOR TO PAINTING
- 17) SEAL EDGES WHERE AN742D36 CLAMP MEETS WITH THE CROSSTUBE USING SIKAFLEX-241/-291 OR MIL-S-8802 CLASS B2 OR PROSEAL 890 SEALANT
- 18) PERFORM RESISTANCE CHECK TO ENSURE MAX RESISTANCE IS 10 MILLIOHMS

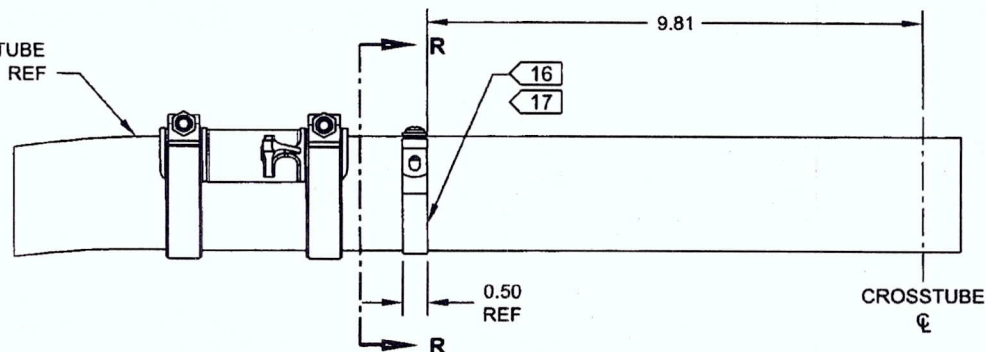
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RELEASED
CP 12.08.17
ECN 12-631



SECTION R-R

D407-667-505 CROSSTUBE REF



DETAIL P
BONDING STRAP INSTALLATION 2 PL

④

DART AEROSPACE LTD	Work Order:	173571
Description: Crosstube Assembly	Part Number:	D407-667-145
Inspection Dwg: D407-667-145 Rev: C		Page 1 of 2

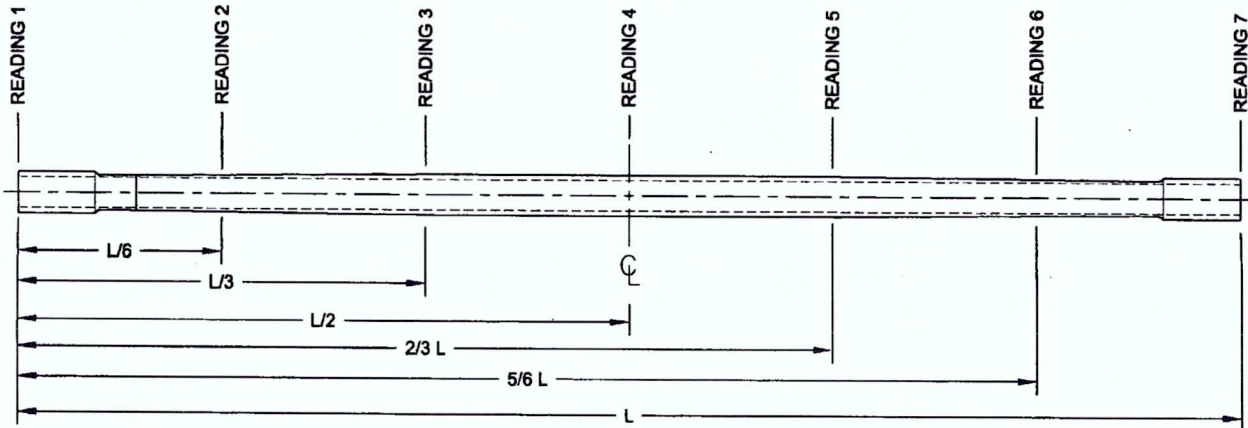
FIRST ARTICLE INSPECTION CHECKLIST

	Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.240	+0.005/-0.000	2.2415	✓		Vern 08	
	1.865	+0.005/-0.000	1.870	✓		"	
	1.878	+0.005/-0.000	1.883	✓		"	
	1.970	+0.005/-0.000	1.975	✓		"	
	2.030	+0.005/-0.000	2.035	✓		"	
	2.165	+0.005/-0.000	2.170	✓		BLM3"04	
	0.125	+/-0.010	.125	✓		Vern 08	
	R0.063	+/-0.010	.063	✓		R.G	
	R0.500	+/-0.010	.500	✓		R.G	
	R0.063	+/-0.010	.063	✓		R.G	
	4.438	+/-0.030	4.421	✓		Vern 08	
SIDE B	2.240	+0.005/-0.000	2.243	✓		Vern 08	
	1.865	+0.005/-0.000	1.870	✓		"	
	1.878	+0.005/-0.000	1.883	✓		"	
	1.970	+0.005/-0.000	1.975	✓		"	
	2.030	+0.005/-0.000	2.035	✓		"	
	2.165	+0.005/-0.000	2.170	✓		BLM3"04	
	0.125	+/-0.010	.125	✓		Vern 08	
	R0.063	+/-0.010	.063	✓		R.G	
	R0.500	+/-0.010	.500	✓		R.G	
	R0.063	+/-0.010	.063	✓		R.G	
	4.438	+/-0.030	4.421	✓		Vern 08	
	113.20	+/-0.020	113.20	✓		Tape	

④

DART AEROSPACE LTD	Work Order: 173571
Description: Crosstube Assembly	Part Number: D407-667-145
Inspection Dwg: D407-667-145 Rev: C	Page 2 of 2

WALL THICKNESS MEASUREMENT



Location	WALL THICKNESS MEASUREMENT (IN)				Deviation Δw (max-min)	TOLERANCE
	w1	w2	w3	w4		
READING 1 L= 0"	.315	.319	.322	.322	.007	0.042"
READING 2 L= 18.867	.172	.181	.186	.177	.014	
READING 3 L= 37.734	.266	.279	.283	.271	.017	
READING 4 L= 56.700	.303	.318	.338	.321	.035	
READING 5 L= 75.467	.267	.275	.280	.272	.013	
READING 6 L= 94.333	.178	.187	.182	.172	.015	
READING 7 L= 113.20	.310	.321	.332	.324	.022	

Calibration Result

Actual Block Thickness: 100-500

Sitescan 250 Measured Thickness: 100-500

DAS
56
9-89

Measured by: M.D.	Audited by: GP	Preliminary Approval:
Date: 2018-06-28	Date: 18-07-03	Date:

Rev	Date	Change	Revised by	Approved
A	04.04.21	New Issue (P/O D407-667-105)	KJ/RF	
B	06.03.09	Dwg Rev updated	KJ/JLM	
C	09.06.11	Dwg Rev updated	KJ	
D	11.06.21	Tolerance revised for 4.438 dimension	KJ	
E	12.06.04	Wall thickness form added	KJ	